## Development and enhancement of University of Washington west-wide seasonal hydrologic forecast system

FINAL REPORT

NOAA Cooperative Agreement number: NAOAR50AR4310015

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Report Figures

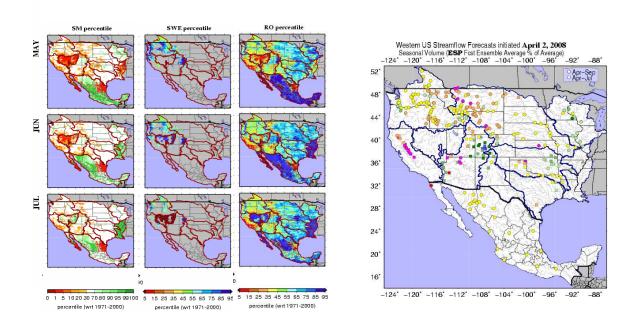


Figure 1: (a) Current forecast domain reflecting expansion to include Missouri and Arkansas-Red River basins, and Mexico. Plot shows soil moisture, snow water equivalent and runoff percentiles ESP forecast for May, June and July 2008 (b) Current streamflow forecast domain of UW West-wide seasonal hydrologic system. (Extended to include Mexico)

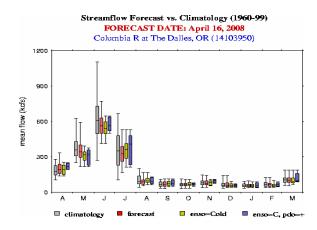


Figure 2. 1 Year ESP forecast for Columbia River at Dalles on April 16, 2008

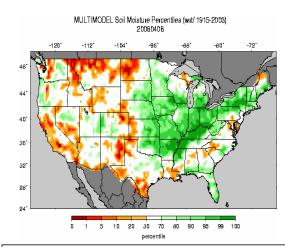


Figure 3. Multimodel based nowcast of soil moisture. Models used: VIC, NOAH, SAC, CLM

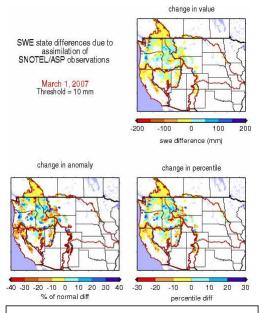


Figure 4. Figure shows the difference in the initial condition of ESP forecast due to assimilation of SNOTEL/ASP observation.

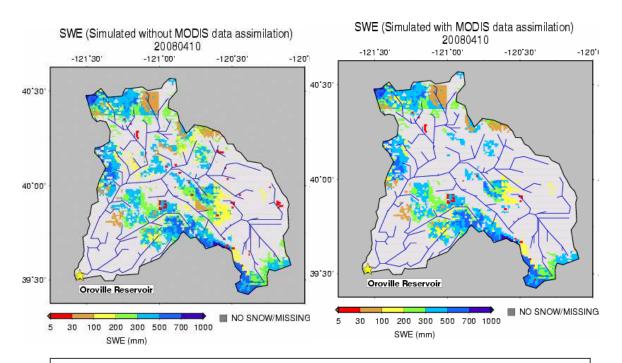
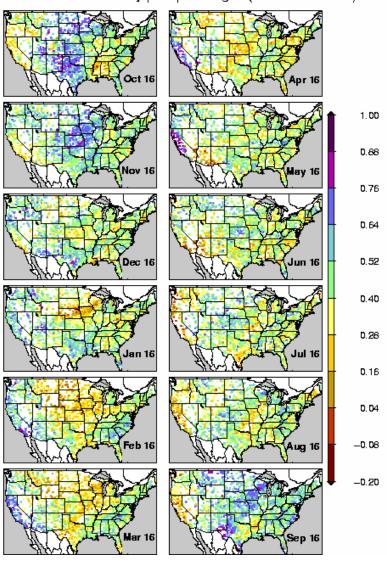


Figure 5. VIC simulated SWE map with and without MODIS data assimilation at April 10, 2008 for Feather River Basin, CA.

## Correlations of 15x91 day precip averages (start date shown)



Correlation

Figure 6. Correlations between precipitations in a two week initial period with precipitation for a longer lead (3-month) period, for monthly varying initialization dates.